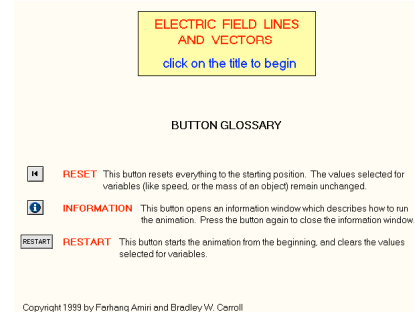


Electrostatics Field Mapping Activity

Go to [http:// www.mrwaynesclass.com/fma](http://www.mrwaynesclass.com/fma)

This will redirect you to <http://physics.weber.edu/amiri/director/DCRfiles/Electricity/efiel24s.dcr>

Once there you will see a page that looks like. This online application is a bit “temperamental.” So be patient with it. This page will allow you to place charges on the screen and it will then draw the field lines. However, it does not draw the arrowheads. You will have to do that. To begin, click the title like it says.



The application’s buttons do not seem to consistently respond to just a mouse click. They respond more predictably to a slight dragging.

- Click on “Select a Charge.” Drag the mouse to “+1. ”
- Click on the “ADD” button at the top.
- Drag the charge to the middle of the screen.
- Click on button at the bottom left that says “Electric Field Lines”
- Draw the answer below. Add your own arrows to the lines

+1 charge	+2 charge	+3 charge




- Click on the “Restart” button to clear the screen.
- Follow the steps above to draw the field lines for +2 and +3 charges. Add your own arrowheads.



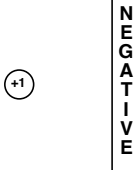
Repeat the above steps to draw the field for a single charge of -1, -2 and -3.

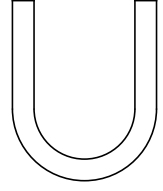
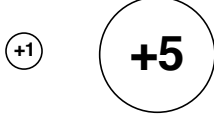

-1 charge	-2 charge	-3 charge

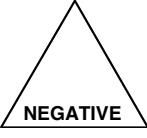
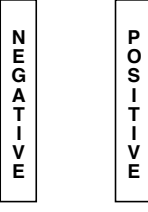
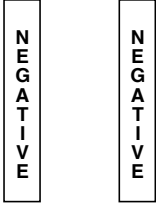
Use what you learned draw the e-field for the shapes on the next page. Use the points to estimate the shape of the objects. You are to add the arrowheads.

Electrostatics Field Mapping Activity

 <p>Two +1 charges separated by 1 inch.</p>	 <p>A +1 charge on the left and a +2 charge on the right separated by 1 inch.</p>	 <p>A +1 charge on the left and a +3 charge on the right separated by 1 inch.</p>
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 <p>+1 charge on the left. -1 charge on the right. Both are 1 inch apart from each other.</p>	 <p>+1 charge on the left. -3 charge on the right. Both are 1 inch apart from each other.</p>	 <p>For this one, Use the charges to <u>approximate</u> the shape. Use only +1's and -1's.</p>
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 <p>Positive horseshoe</p> <p>Use only +1 charges to approximate the shape.</p>	 <p>Use only +1 charges. +1 charge is on the left.</p>	 <p>Use only -1 charges to approximate the shape.</p>
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Electrostatics Field Mapping Activity